OIPE
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PATENT & TRADEMARK OFFICE
JC25

Fig. 1

(PRIOR ART)

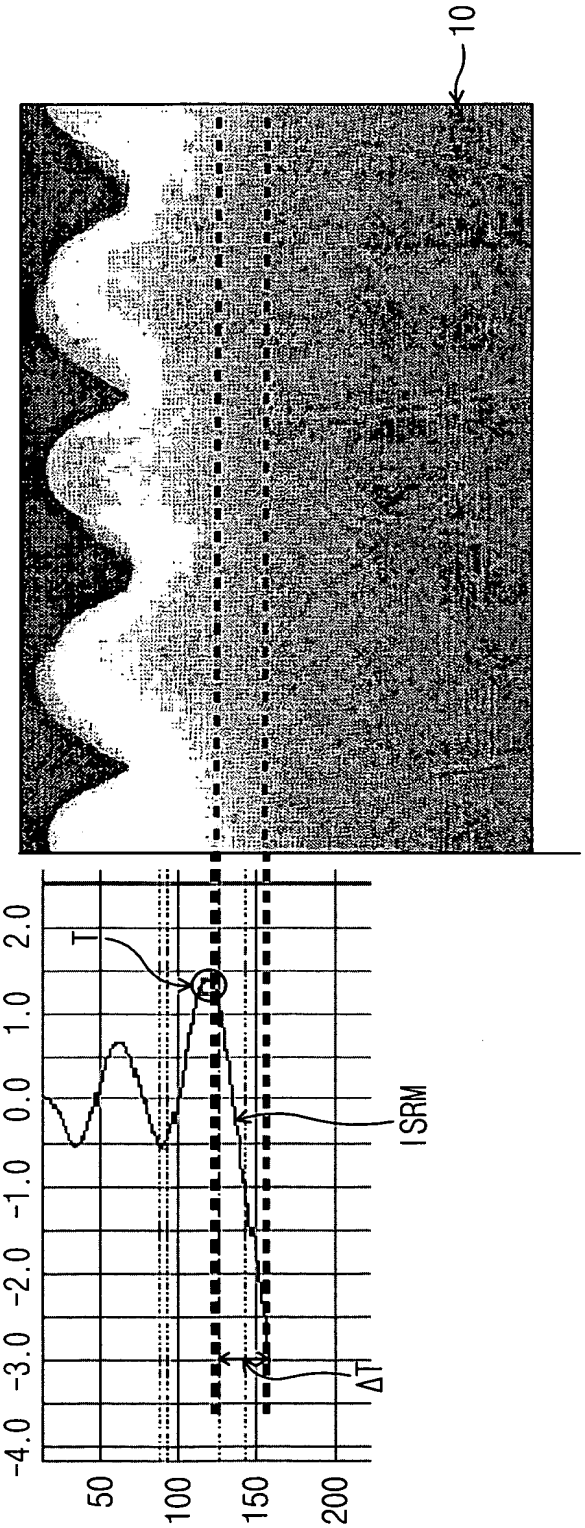


Fig. 2

(PRIOR ART)

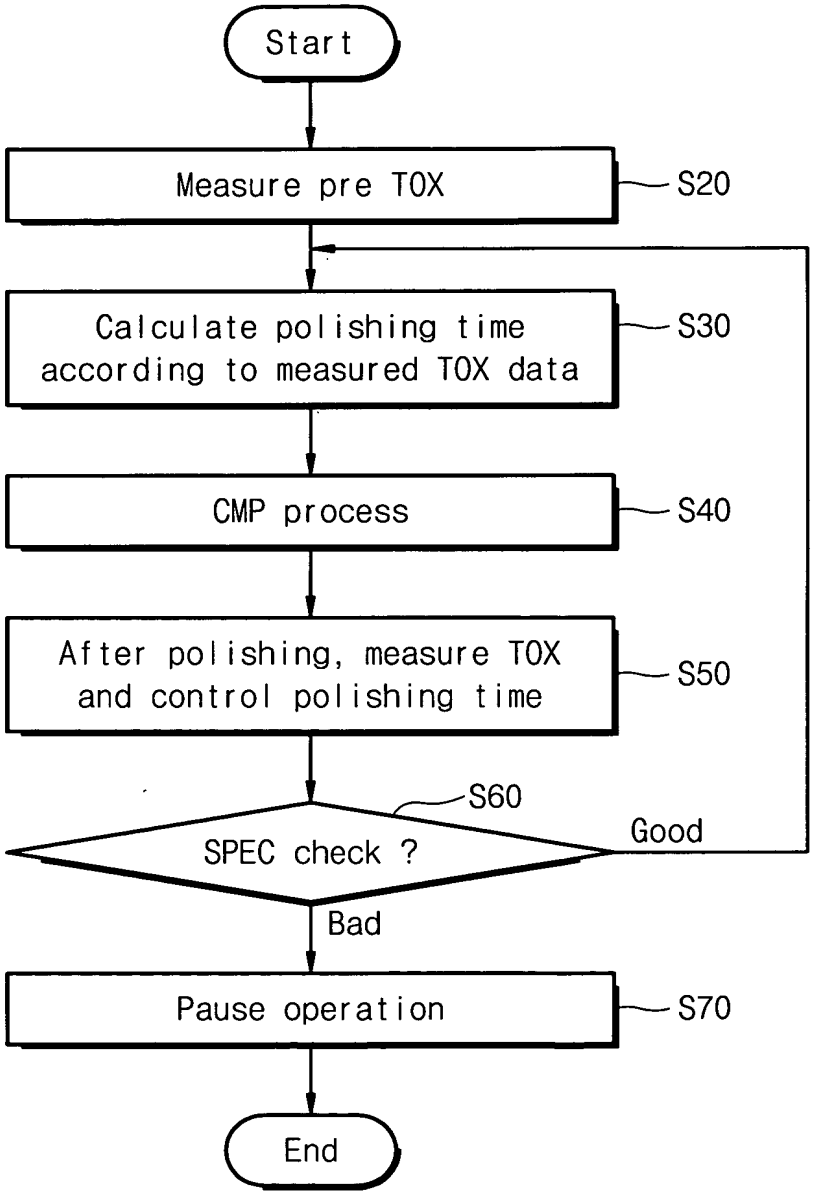


Fig. 3

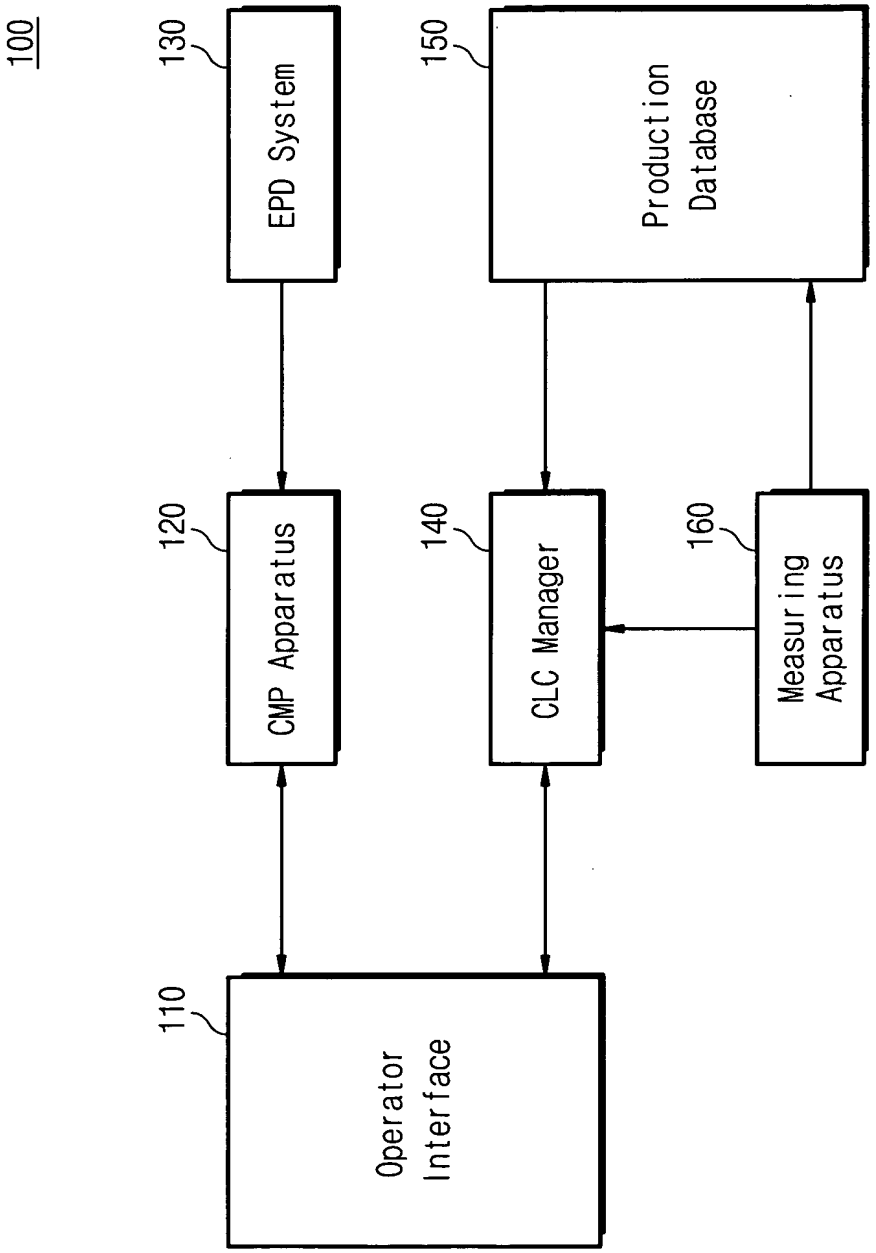

100
130
EPD System
150
Production Database
120
CMP Apparatus
140
CLC Manager
160
Measuring Apparatus
110
Operator Interface

Fig. 4

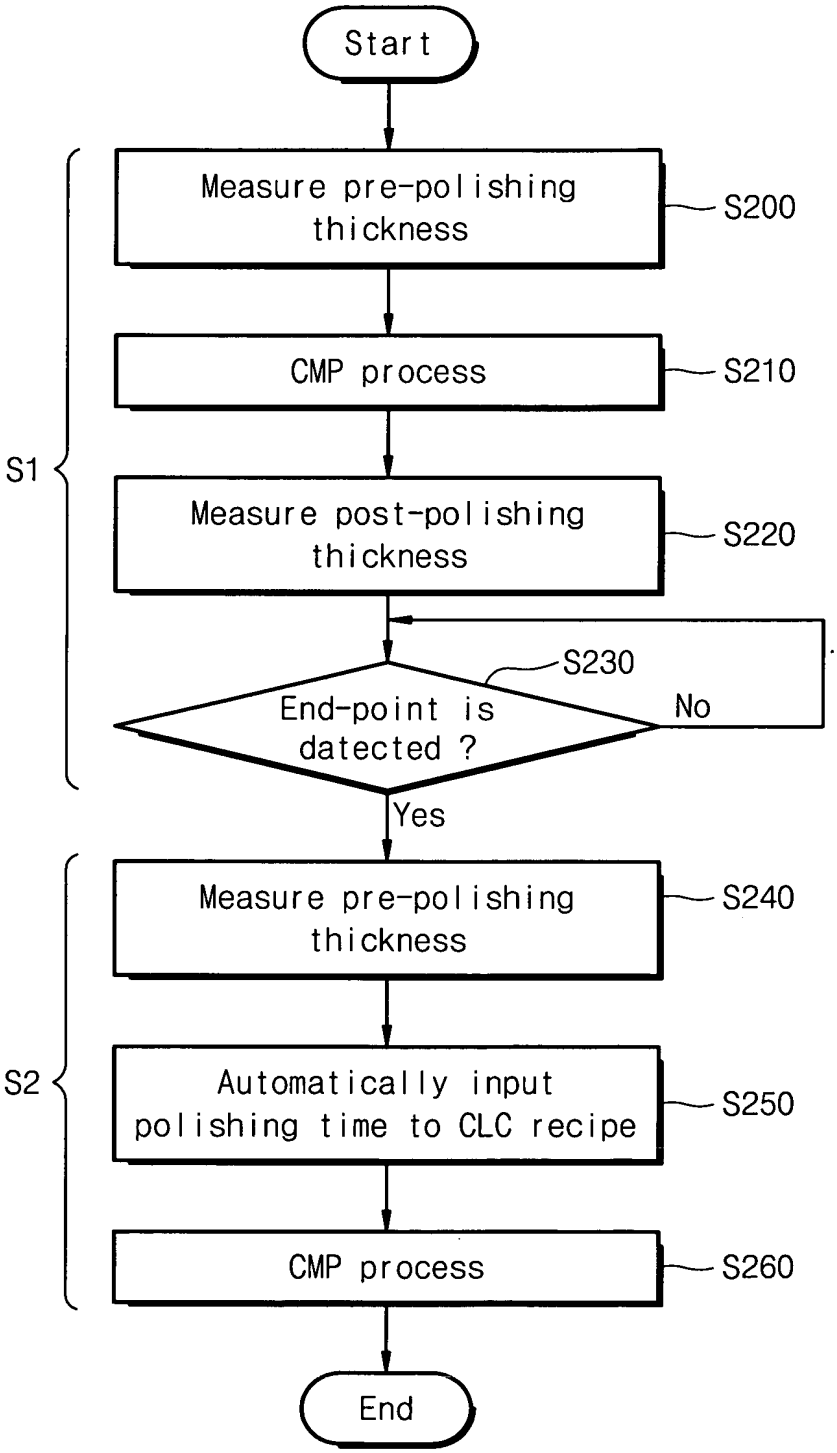
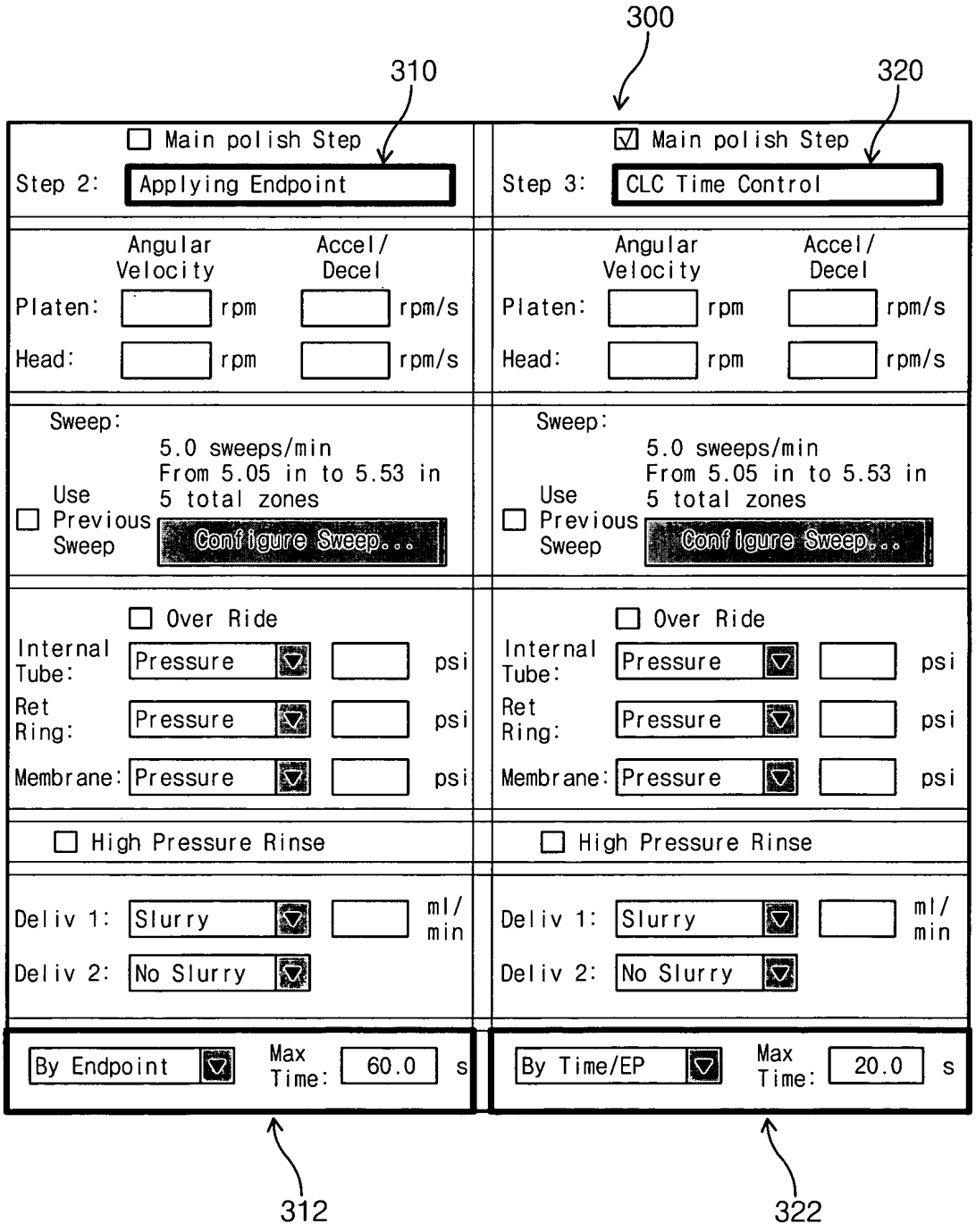

Start
Measure pre-polishing thickness
S200
CMP process
S210
S1
Measure post-polishing thickness
S220
S230
End-point is datected ?
No
Yes
Measure pre-polishing thickness
S240
S2
Automatically input polishing time to CLC recipe
S250
CMP process
S260
End

Fig. 5


300
310
320
Main polish Step
Step 2:
Applying Endpoint
Main polish Step
Step 3:
CLC Time Control
Angular Velocity
Accel/ Decel
Platen:
rpm
rpm/s
Head:
rpm
rpm/s
Sweep:
5.0 sweeps/min
From 5.05 in to 5.53 in
5 total zones
Use Previous Sweep
Configure Sweep...
Over Ride
Internal Tube:
Pressure
psi
Ret Ring:
Membrane:
High Pressure Rinse
Deliv 1:
Slurry
ml/ min
Deliv 2:
No Slurry
By Endpoint
Max Time:
60.0
s
By Time/EP
20.0
312
322